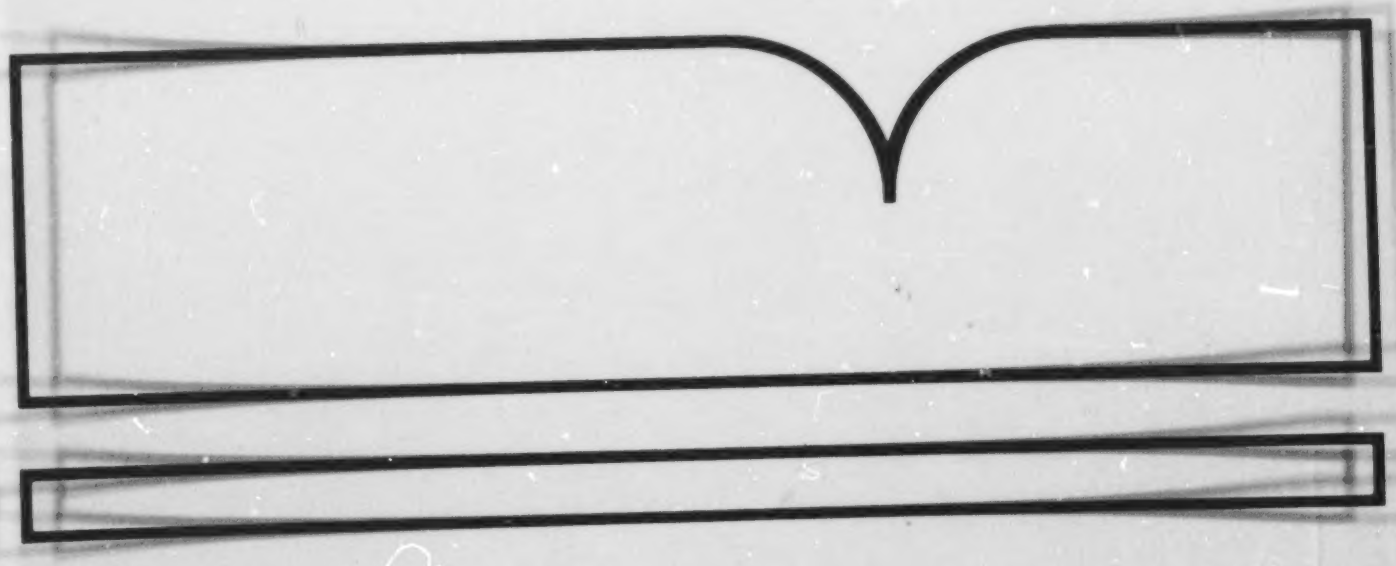
PB88-220397

Superfund Record of Decision (EPA Region 9) Operating Industries, Monterey Park, California (First Remedial Action), July 1987

(U.S.) Environmental Protection Agency
Washington, DC

31 Jul 87



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EPA/ROD/R09-87/013
July 1987

PB88-220397

EPA

Superfund Record of Decision:

Operating Industries, CA

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16. ABSTRACT

The Operating Industries, Inc. (OII) site, consisting of a 190-acre landfill, is located in Monterey Park, California. From 1948 to 1952, the site was used to dispose of municipal garbage by the City of Monterey Park. Prior to 1948, the site and surrounding areas were quarried for sands and gravels. Between 1952 and 1984, under the private ownership of OII, the landfill received municipal and industrial liquid and sludge wastes. The construction of a freeway in 1974, split the landfill into a north and south parcel. By June 1975, waste disposal operations curtailed in the northern parcel, limiting operations to the area south of the freeway. In 1954, the Regional Water Quality Control Board permitted disposal of liquids at the site. Some of these liquids, and some liquid industrial wastes disposed prior to the Board's permit, are considered hazardous by current statutes and regulations. In 1975, a 32-acre area in the southern parcel was permitted to accept Class II-1 wastes. Waste disposal operations ceased in October 1984. In 1979, Getty Synthetic Fuels, Inc.(GSF), having established a contractual relationship with OII for the extraction of gas from the landfill, began gas processing activities (GPA). EPA took over operations of the GPA in June 1987 following a decision by GSF to abandon activities at the landfill. EPA has been conducting site control and monitoring activities at the site since May 1986. Additionally, EPA has conducted a number of emergency actions to mitigate potential
(See Attached Sheet)

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Record of Decision Operating Industries, CA First Remedial Action Contaminated Media: leachate Key contaminants: VOCs Dis.	gas processing activities and	

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EPA/ROD/R09-87/013
Operating Industries, CA
First Remedial Action

16. ABSTRACT (continued)

threats to public health and the environment. Leachate generated at the site is a hazardous waste as defined by RCRA regulations and contains VOCs including TCE, vinyl chloride, benzene, and toluene.

The selected remedial action for this site includes site control and monitoring activities. The first control component is operation and consists of opening/closing valves, starting motors and other mechanical functions. Maintenance is the second control component and can consist of repairs to existing systems or preventative maintenance and improvements. Gas wells and leachate pumping and collection will be monitored. The estimated present worth cost for this interim remedy is $5,100,000.

DECLARATION FOR THE RECORD OF DECISION

SITE NAME AND LOCATION: Operating Industries, Inc., Monterey Park, California

STATEMENT OF PURPOSE:

This decision document represents the selected remedial action for the Operating Industries, Inc. site developed in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the National Oil and Hazardous Substances Contingency Plan (NCP) (40 C.F.R., Part 300).

The State of California has concurred on the selected remedy.

STATEMENT OF BASIS:

This decision is based upon the administrative record (index attached). The attached index identifies the items which comprise the administrative record upon which the selection of a remedial action is based.

DESCRIPTION OF THE SELECTED REMEDY:

Full-time Site Control and Monitoring, Level 1 and 2. This alternative provides for the continuance of site control and monitoring activities at the current level of effort, and allows for future system improvements throughout the project life. The selected remedy represents an operable unit consistent with the final remedial action.

Declarations

The selected remedy is protective of human health and the environment and has been determined to be cost effective and consistent with the final remedial action. As an interim operable unit, the selected remedy will not be required to achieve all applicable or relevant and appropriate requirements (ARAR's). However, the final remedy will address technologies which should be capable of achieving ARAR's for the site. This remedy satisfies the preference for treatment that reduces toxicity, mobility, or volume as a principal element. Finally, it is determined that this remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable.

7.31.87
Date

John Wise
John Wise
Deputy Regional Administrator
U.S. EPA Region 9

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF HEALTH SERVICES
107 SOUTH BROADWAY, ROOM 7011
LOS ANGELES, CA 90012
(213) 620-2380

May 8, 1987

Michele Dermer (T-4-2)
U.S. EPA, Region 9
215 Fremont Street
San Francisco, CA 94105

Dear Ms. Dermer:

SITE CONTROL AND MONITORING FEASIBILITY STUDY, OPERATING INDUSTRIES, INC.,LANDFILL SITE

We have reviewed the subject study and agree that alternative No. 3, as presented therein, is the preferred alternative. Alternative No. 3 is more protective of public health and the environment than the other alternatives, and we urge that it be implemented.

Please call me if you wish to further discuss this matter.

Sincerely,

Harry N. Sneh
Assessment and Mitigation Unit
Southern California Section
Toxic Substances Control Division

HS:ma

Decision Summary

Operating Industries, Inc.

Monterey Park, California

July 1987

Prepared by Michele S. Dermer

Enforcement Response Section

Superfund Programs Branch

Toxics and Waste Management Division

United States Environmental Protection Agency

215 Fremont Street

San Francisco, California 94105

Decision Summary
Operating Industries, Inc. Site
Monterey Park, California

Site Location and Description

The Operating Industries, Inc. (OII) site is located approximately 10 miles east of Los Angeles in Monterey Park, California (see Figure 1). The OII site consists of a 190 acre landfill which was operated from 1948 to 1984, and was used for disposal of municipal and industrial waste. The landfill contains hazardous waste and hazardous substances, and was listed on the National Priorities List in May, 1986.

The Pomona Freeway divides the site into a 45-acre northern parcel and a 145-acre southern parcel. The top of the south parcel of the landfill is about 150 to 250 feet above the ground surface and the bottom of the landfill is about 200 feet below ground surface. Elevation of the upper surface of the south parcel of the landfill is about 620 to 640 feet above Mean Sea Level (MSL).

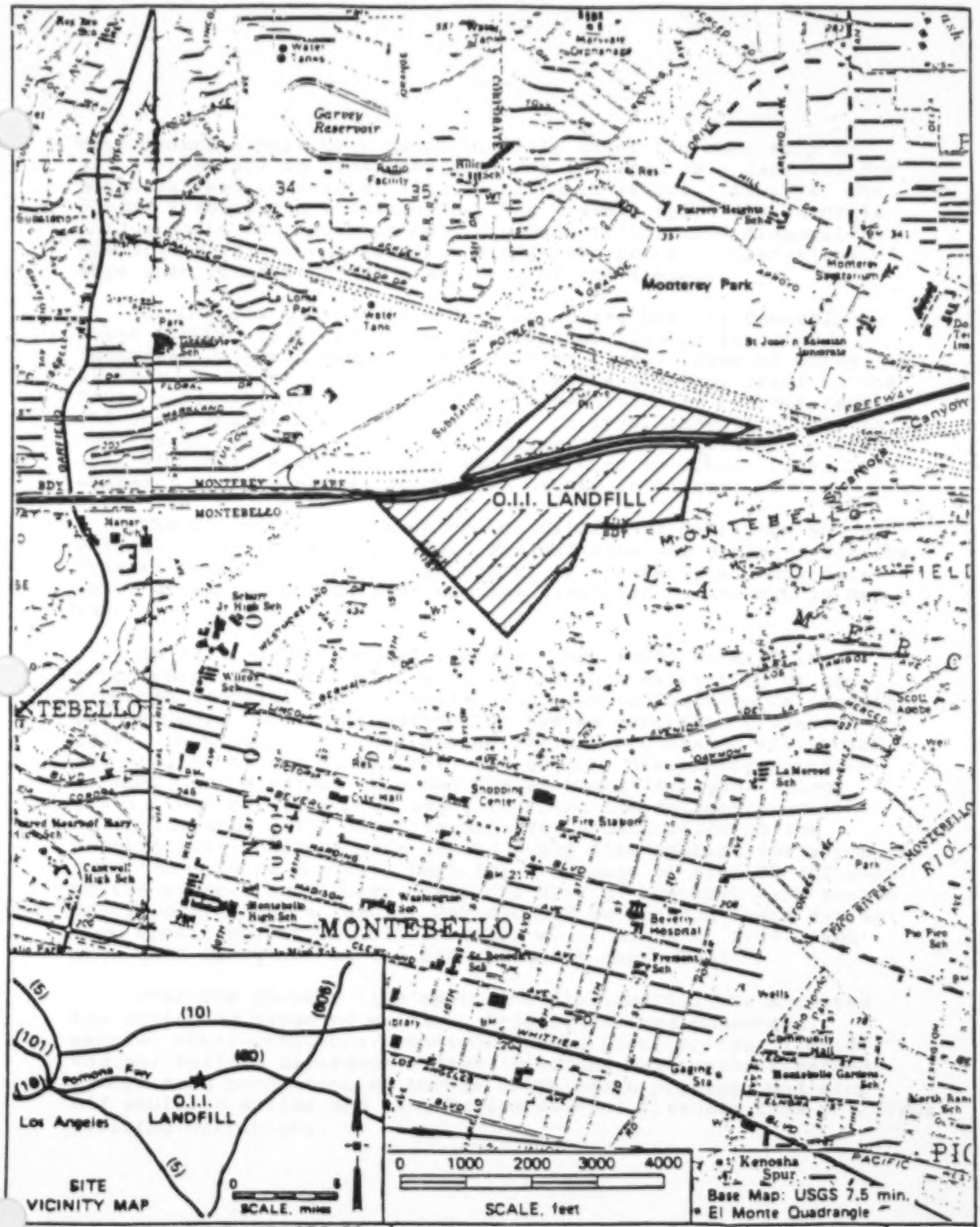
The OII site is presently owned by the former operators, Operating Industries, Inc. The EPA has been conducting site control and monitoring (SCM) activities at the site since OII ceased performing these activities in May, 1986. In addition, EPA has conducted a number of emergency actions to mitigate potential threats to public health and the environment. The site has become more stabilized as a result of the SCM activities and the emergency actions.

The City of Monterey Park has a population of 54,338 (1980 Census). The City of Montebello, which borders the southern parcel of the landfill has a population of 52,929 (1980 Census). Several residents of Montebello are situated in homes immediately adjacent to the boundaries of the landfill. Within a three mile radius of the site, there are approximately 53,000 residences.

The perimeter of the southern parcel of the landfill is fenced. Entrance is restricted and 24-hour security is provided. Several businesses are currently operating on the northern 45-acre parcel. These businesses have a lease arrangement with the operators.

Site History

Landfill operations at the site began in 1948. From 1948 to 1952, the site was used to dispose of municipal garbage by the City of Monterey Park. Prior to 1948, the site and surrounding areas were quarried for sands and gravels. In January 1952, the



Project: OPERATING INDUSTRIES LANDFILL Project No. 120WP1	LOCATION MAP	Fig. 1

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site became a privately owned landfill under the ownership of OII. From 1952 to 1984, the site was operated as a landfill for municipal and industrial liquid and solid wastes. In 1974, the Ponoma Freeway was constructed. The freeway split the landfill into a north and south parcel. In June 1975, waste disposal operations were curtailed in the northern parcel. Operations were then limited to the area south of the freeway.

On October 6, 1954, the Regional Water Quality Control Board (RWQCB) first permitted disposal of liquids at OII (Monterey Disposal Company Dump at that time). Some of these liquids, and some liquid industrial wastes disposed prior to the Board's permit, are considered to be hazardous by current Federal and State statutes and regulations. In 1975, a 32-acre area in the western part of the southern parcel was established as the area of liquid waste disposal and permitted to accept Class II-1 wastes. Waste disposal operations ceased in October 1984.

The OII site was placed on the California Hazardous Waste Priority List in January 1984. The OII site was proposed for the Federal National Priority List (NPL) of uncontrolled hazardous waste sites in October 1984 and was finalized on the NPL in May 1986.

In 1974, Getty Synthetic Fuels, Inc. (GSF) entered into a contractual relationship with OII for the extraction of gas from the landfill for processing and sale to Southern California Gas Company. GSF's gas extraction system went into operation in 1979. In March, 1986, GSF ceased its gas processing activities and applied to the South Coast Air Quality Management District (SCAQMD) for a permit to construct an electrical generating plant. At that time, GSF began to flare the extracted gas in an incinerator until final permits for construction of the electrification plant were issued. GSF also applied for a permit from the City of Monterey Park for discharge of treated effluent to the sewer. In January, 1986 the City of Monterey Park denied GSF's permit. As a result, GSF decided to abandon their extraction operations at the OII landfill as of March 1, 1987. EPA took over operation of the GSF system in June, 1987.

Over its 36-year life span, the OII landfill has accepted the following types of wastes: Residential and commercial refuse; water-insoluble, nondecomposable inert solids; liquid wastes; various hazardous wastes including wastewater treatment sludge from production of chrome oxide geeen pigment; and slop oil emulsion solids and tank bottom sludges (leaded) from petroleum refining operations.

Both landfill gas and leachate are generated by the OII site. From April 1983 to October 1984, about 25,000 gallons of leachate per day was collected by OII's leachate collection system and disposed of by mixing with the incoming solid waste. Since then, collected leachate has been stored on-site in Baker tanks, and transported to a permitted off-site treatment facility.

The leachate generated at the OII site is a hazardous waste as defined by RCRA 261.3 regulations, and contains hazardous organic constituents, such as vinyl chloride, trichloroethylene, benzene and toluene.

Land uses around the landfill began to undergo significant changes in 1974. These changes included construction of the Pomona Freeway (1974), and increased residential development within Montebello City limits to the southwest (1975) and south (1976) of the facility. A residential area is directly adjacent to portions of the southern and western boundaries of the landfill.

Discussion of Past Site Control and Monitoring Activities

A number of site problems have been identified by State and Federal regulatory agencies. These include:

- Hazardous leachate seepage and breakthrough on the landfill slopes.
- Subsurface and off-site migration of leachate.
- High landfill gas (methane) levels exceeding the lower explosive limit in nearby residential areas.
- Vinyl chloride present in ambient air emissions and in subsurface gas on-site and off-site.
- Underground fires and associated subsidence on-site.
- Slope instability and erosion problems.
- Surface runoff from the elevated fill area.
- Groundwater contamination from leachate and migrating landfill gas.
- Noxious and offensive odors on- and off-site.

Partial control measure performed on-site by the owner in prior years include:

- Installation of a leachate collection system.
- Development of an air-dike air injection system on the west side of the site to control subsurface gas migration.
- Installation of gas extraction wells around the perimeter (except for the air-dike area) of the site and a gas flaring station.
- Site contouring, slope terracing, and vegetation.
- Covering refuse with additional fill.

The partial control measures instituted by the owner were insufficient to maintain site integrity and the EPA, therefore, instituted emergency response actions in order to protect public health, welfare and the environment. Emergency actions performed to date by EPA include:

- Slope stability and erosion control improvements, including construction of a toe buttress.
- Surface runoff and drainage improvements.
- Rehabilitation of the main flare station.
- Site security.
- Placement of vented water meter box covers off-site.

The owner/operator's ability to control the environmental problems and maintain the control systems began to diminish significantly in late 1984 when it notified EPA and the California Department of Health Services (DOHS) that it could no longer afford to truck leachate offsite for treatment. EPA conducted the leachate trucking and treatment for several months, and then DOHS assumed responsibility for this activity, while OII continued to attempt to operate and maintain remaining on-site control systems. On May 19, 1986, OII notified the State that they intended to discontinue all site control and monitoring activities on the site except irrigation. The EPA therefore assumed these activities on May 20, 1986. SCM activities then continued to be performed by EPA, with the State DOHS providing leachate trucking and treatment, and OII providing on-site irrigation. On December 15, 1986, the State transferred responsibility for leachate trucking and treatment to the EPA. The EPA has also requested that OII allow EPA to assume full responsibility for irrigation of the site, since EPA believes that OII has not properly conducted the activity.

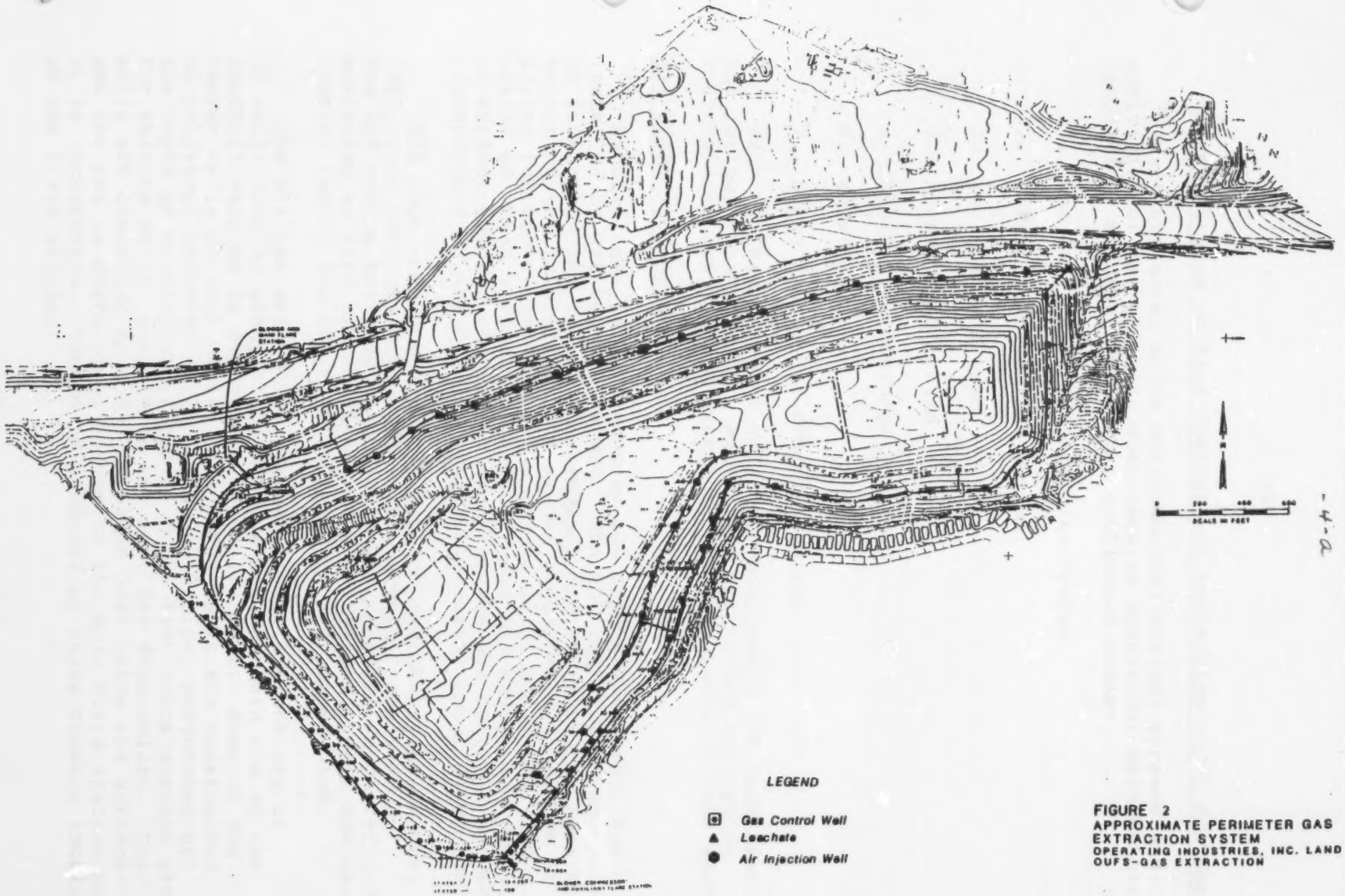

FIGURE 2
APPROXIMATE PERIMETER GAS EXTRACTION SYSTEM
OPERATING INDUSTRIES, INC. LAND OUFS-GAS EXTRACTION

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Current Status of Site Control and Monitoring (SCM) Systems

There are seven major environmental control systems and activities at the OII site that require operation, maintenance, inspection, and monitoring on a continuous basis:

1. Gas Extraction and Air Dike System
2. Leachate Collection System
3. Irrigation System
4. Access Road System
5. Stormwater Drainage System
6. Site Security
7. Slope Repair and Erosion Control

Each of these systems and their components are discussed in the following paragraphs. Recent SCM activities and system improvements are also presented in the discussion of each system.

GAS EXTRACTION SYSTEM

Landfill gas is extracted by two separate systems, one installed by GSF and one by OII. The GSF gas collection system is located on the top of the landfill and extracts gas from the center of the landfill. This system consists of a network of piping for conveyance of gas, a matrix of 57 gas wells, and a series of seven surface collectors. The GSF system was designed to extract gas for commercial purposes and was operated by GSF (independent of the OII gas control systems), until June, 1987.

EPA took over operation of the GSF system in early June, 1987, with GSF providing short-term technical assistance. The GSF system must now be operated, maintained, inspected and monitored as part of the routine SCM activities, until the Gas Control remedy for the site is designed and implemented.

The OII gas extraction system (Figure 2) consists of 82 wells located along the perimeter and southern rim of the landfill varying in depth from 30 to 170 feet. Some of the deeper wells go into native soil. The wells are constructed of polyvinyl chloride (PVC) schedule 40 pipe, perforated at the depth of extraction (about 15 to 25 feet below surface grade for shallow wells, and 110 to 150 feet for deep wells). The wells are connected to a PVC pipeline just below the surface, and the gas is drawn under vacuum to the main flare station where it is incinerated. Vacuum is produced by three blowers located at the flare station.

The OII main flare station is located on the northwest corner of the landfill adjacent to the GSF gas facility. The flare station is enclosed by a security fence and consists of three flare stacks, blowers, flame arrestors, electric motors and instrumentation for control, recording, and monitoring. The blowers at the flare station draw the gas out of the extraction wells and pump the gas to the flare stacks where it is incinerated to reduce surface and subsurface emissions from the site. In addition to the main flare station, an auxiliary flare station with two stacks and blowers is located on the southwest corner of the landfill close to the compressor equipment for the air-dike system. The auxiliary system is operated only when it is desired to gather more than 4500 cubic feet per minute (cfm) of landfill gas from the OII gas collection system, or when needed as a standby to replace units taken out of service at the main flare station. The capacity of the standby system is 1000 cfm.

When OII operated the landfill, continued problems were experienced at the main flare station due to fouling of the mechanical systems by condensate. EPA initiated emergency actions in 1986 to overhaul and repair the main flare station, and to install a demister and condensate collection tank to reduce the amount of liquids carried by the gas into the flare station equipment. During the installation period for this equipment, rehabilitative maintenance was also performed on the flare station equipment. It had been inoperative since March, 1986, during which time the auxiliary station was used. The main flare station resumed operation December 17, 1986.

OII AIR DIKE SYSTEM

The air-dike system consists of 26 air injection wells along approximately 2,000 feet of property line situated at the southwestern and western borders of the landfill (Figure 2). The injected air is intended to form a high pressure air barrier under the ground along the property line, preventing migration of landfill gas off-site. To monitor the performance of the air-dike system, gas probes have been installed midway between each of the injection wells. The injection wells are spaced approximately 100 feet apart and probes are approximately 50 feet from the nearest well (see Figure 3). The probes are 20 feet deep. The goal of the air-dike system is to minimize the amount of landfill gas migration beyond the site boundary. The air-dike system can be adjusted by opening or closing the individual throttling valves at each injection well head. Pressurized air to the injection wells is supplied by the compressor equipment located on the southwest corner of the landfill, at the auxiliary flare.

Additional perimeter probes are located at the perimeter of the landfill to monitor performance of the OII gas extraction system. These probes are numbered and colored. Probe depths are usually 5, 15, 25, 35, and 45 feet. However, exact depth may

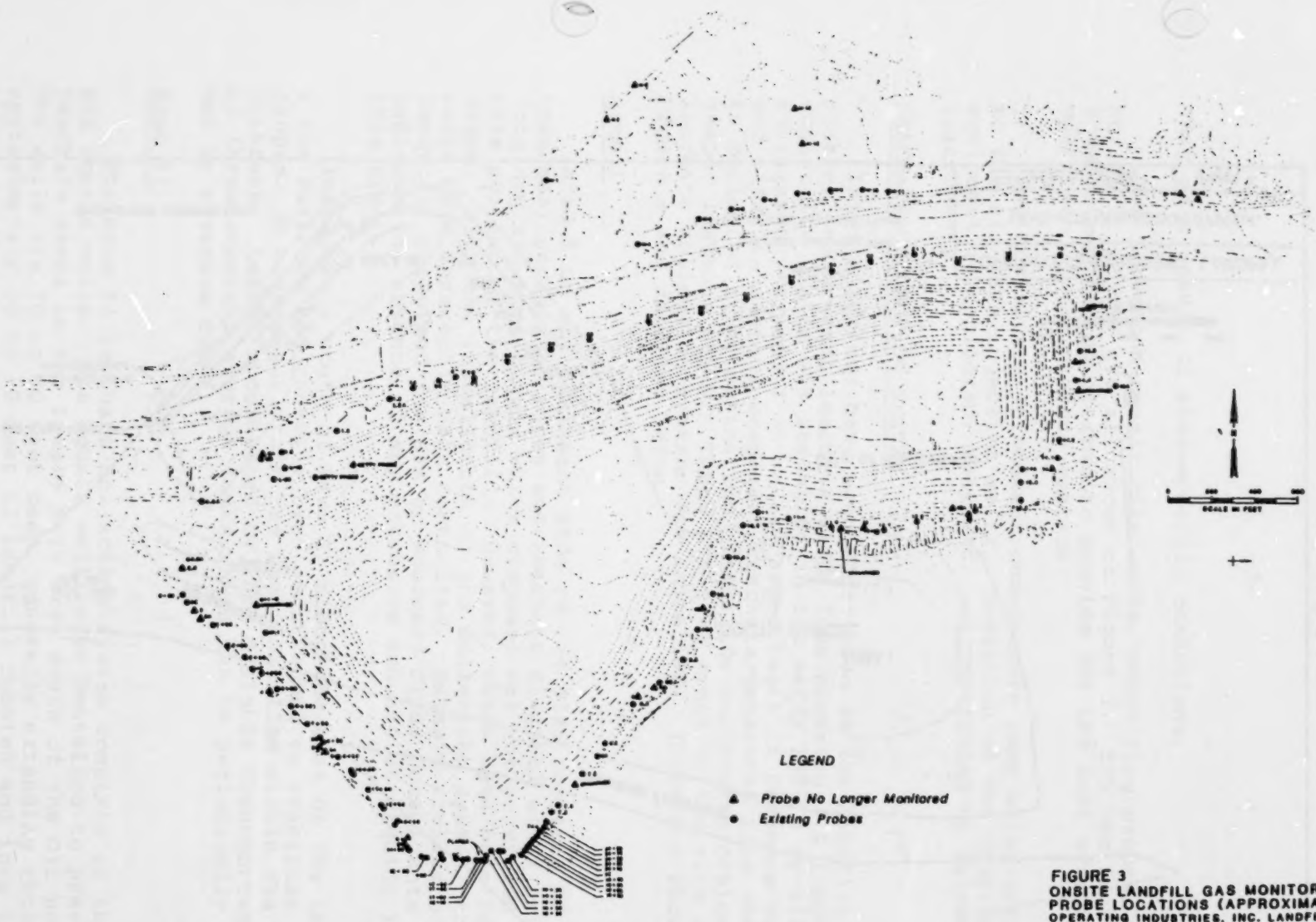

FIGURE 3
ONSITE LANDFILL GAS MONITORING PROBE LOCATIONS (APPROXIMATE)
OPERATING INDUSTRIES, INC. LANDFILL
OUFS-GAS EXTRACTION

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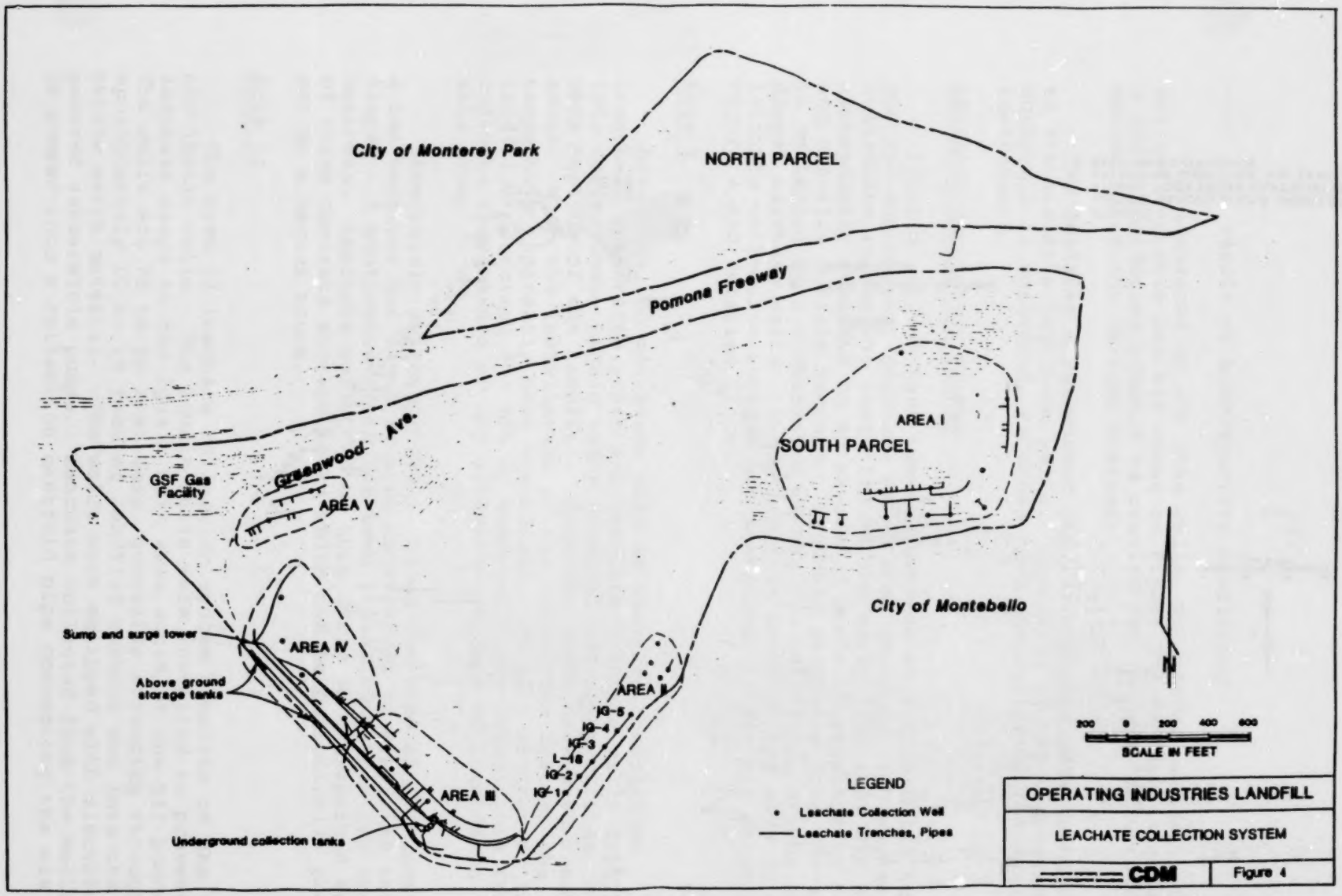

City of Monterey Park
NORTH PARCEL
Pomona Freeway
Greenwood Ave.
GSF Gas Facility
AREA V
AREA I
SOUTH PARCEL
City of Montebello
Sump and surge tower
AREA IV
Above ground storage tanks
AREA II
IG-5
IG-4
IG-3
L-18
IG-2
IG-1
AREA III
Underground collection tanks
N
200 0 200 400 600
SCALE IN FEET
LEGEND
Leachate Collection Well
Leachate Trenches, Pipes
OPERATING INDUSTRIES LANDFILL
LEACHATE COLLECTION SYSTEM
CDM
Figure 4

vary as a result of site-specific conditions.

The locations of air dike wells, monitoring probes, and perimeter probes are all shown on Figure 3. EPA has instituted a daily monitoring program to provide for the most effective operation of the various systems.

Two positive displacement compressors pump water-cooled air to the air-dike injection wells. Operation of the compressor equipment is monitored, recorded, and controlled by automatic instruments.

LEACHATE COLLECTION SYSTEM

Interim actions have been undertaken at the landfill to control and prevent leachate seeps from occuring. A leachate collection system was installed in the early 1980's by OII and subsequently expanded on an as-needed basis in response to on- and off-site surface seepage. Leachate generated from the site is collected by a combination of shallow collection drains and deeper leachate wells. There are five areas on the site in which leachate collection systems are installed. These are shown on Figure 4 and detailed below.

Area I

Area I on the southeast side of the site consists of trenches, perforated pipes and leachate disposal wells drilled into dry refuse. Liquid waste disposal was not permitted on this portion of the landfill. However, there have been leachate seeps. With the installation of the collection system, the seeps have apparently been controlled. Seismic studies of the landfill, performed for EPA by Woodward Clyde Consultants (WCC) indicate the absence of any extensive amounts of liquids in this area.

Immediately south of Area I, along the base of the landfill, a toe buttress has recently been constructed to stabilize the slopes. A continuous drain has been installed within the toe buttress. Leachate collected by this drain is transported to one of three concrete storage tanks which can be periodically pumped out by a vacuum truck.

Area II

The Area II leachate collection system consists of the six Iguala wells. The Iguala wells were installed to prevent leachate seeps in the Iguala Park area south of the OII boundary. The wells are 70 to 80 feet deep, generally extending through approximately 10 to 15 feet of landfill rubbish and into the native earth material. The wells were equipped with electrically powered submersible pumps. Leachate collected from the wells is pumped into a collection manifold pipe connecting the six

wells to the underground tanks in leachate collection Area III. There are five other wells in Area II that are not connected to the collection system. In the past, leachate has been pumped from these wells into vacuum trucks. There is no record of pumping for the past several years.

Two new collection wells were installed in 1986 as part of the emergency response actions for the site. These wells arel part of the collection system installed to prevent seeps in the Iguala Park area. The wells are located 50 feet on either side of well #L-18.

Area III

The leachate collection system in Area III, on the southwest corner of the site, consists of a series of buried, perforated pipes and trenches discharging into three buried steel tanks. The buried steel tanks consist of one 3,500 gallon tank which has the upper part of both ends perforated, a 8,000 gallon tank and a 10,000 gallon tank. Each tank can be individually pumped out. The tanks are resting in a gravel bed which can also be pumped to remove leachate collected within the gravel bed surrounding the tanks. The 3,500 gallon tank, with perforations in the upper part of each end, is for collecting leachate in the gravel bed surrounding the cluster of tanks. All three tanks are from old vacuum trucks and do not meet current regulations for underground tanks.

Southwest and down-slope of the buried tanks, along the boundary of OII, is a french drain system which flows to a 36-inch diameter unlined sump. Leachate is pumped from the sump to the buried tanks.

Area IV

Leachate collected in the buried tanks in Area III is pumped to three 20,000 gallon, above-ground storage tanks (Baker tanks) located in the vicinity of the surge tower in Area IV. Leachate is removed from the storage tanks by a vacuum truck and transported off-site for treatment and disposaI. During the period from April 1983 through October 1984, the leachate was trucked to and disposed of in the active landfill working area.

The main leachate collection system in Area IV on the westerly side of the site is similar to the system in Area III, consisting of perforated pipe and trenches which feed to an unlined, 36-inch diameter sump in the vicinity of the surge tower. The surge tower serves as a standpipe providing adequate head to gravity flow leachate into the buried tanks in Area III.

Area V

The leachate collection system in Area V is very similar to the system in Area I, consisting of trenches, perforated pipe and leachate disposal wells drilled into dry refuse. It is believed that leachate seeps occurred in this area during the stockpiling of dirt immediately up-slope. The existing system in Area V is apparently controlling surface seeps in this area.

In December 1986, approximately 97,000 gallons of leachate were hauled off-site for treatment and disposal. This represents a daily average generation of approximately 3,125 gallons of leachate. EPA has initiated emergency response actions to repair and improve the existing leachate collection system. These repairs and improvements were necessary to reduce the potential for groundwater contamination from leaking underground tanks, and to improve the effectiveness of the collection system to reduce the potential for off-site migration of leachate. Additional improvements are still necessary to improve the existing collection system.

IRRIGATION SYSTEM

OII attempted to landscape the landfill slopes and to establish a vegetative cover to reduce erosion and to improve aesthetics. A fixed piping and sprinkler system, operated by manually controlled valves, was installed to irrigate the vegetation.

Irrigation on the landfill must be controlled to reduce the potential for adverse effects of the irrigation water, such as increasing the leachate volume, adding moisture to marginally stable slopes, or eroding the surface in areas of very heavy irrigation runoff.

EPA has taken actions to minimize irrigation requirements at the OII landfill. Where slopes were regraded and compacted, one area was revegetated, while the other slope received a soil sealant. The area that was revegetated with indigenous plants will require light irrigation. The toe buttress will also be vegetated with drought resistant plants. Both areas will need regular irrigation.

ACCESS ROAD SYSTEM

Another SCM task is the maintenance of a network of roadways which provides access to all sections of the landfill. The road network is shown on Figure 5. As part of EPA's emergency response actions at OII, landfill roadways were graded in 1986 and concrete ditches installed to improve surface drainage, enhance trafficability, and reduce maintenance effort. All roads on the site are dirt or gravel surfaced. There are no warning or traffic control signs, and no guard rails installed along any of the roadways. Continuous maintenance of roadways is a present and future SCM component.

STORMWATER DRAINAGE SYSTEM

The site is split by the Pomona Freeway into north and south parcels. South parcel stormwater outfalls from the north slope via four storm sewer lines henceforth called lines "A", "B", "C", and "D". Line A, a 48- to 60-inch diameter pipe, drains stormwater runoff from the top of the south parcel, and the west portion of the north slope of the landfill, channeling it down the west side of the north slope to a concrete trapezoidal drainageway paralleling the Pomona Freeway. Line B drains runoff from the upper and lower terraces midway along the north slope and also routes it to the freeway channel. Line C, located at the northeast corner of the south parcel, also drains stormwater runoff from the upper and lower terraces and channels it to an off-site gully which leads to an unimproved freeway drainage ditch. Line D is a half-round exposed corrugated pipeline which drains the northeast corner of the landfill. Figure 6 gives the location of these four storm sewer lines.

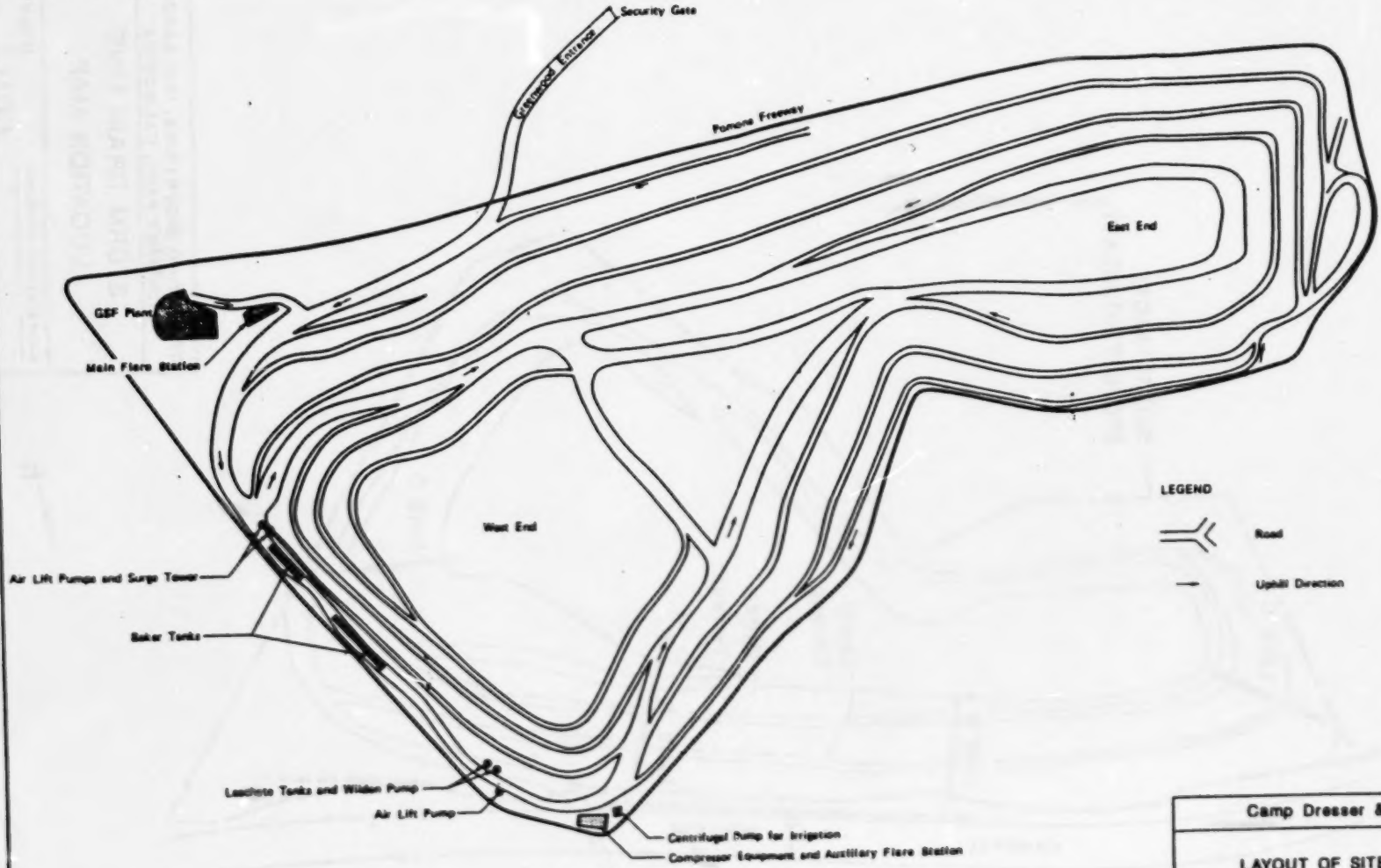
The storm drain lines were designed in 1973 and constructed in 1975 as part of a proposed landfill closure plan. A subsequent lack of maintenance, in combination with a large sediment load and slope creep, had separated the joints and filled catch basins.

EPA completed rehabilitation of the storm drains in 1986, rebuilding Line D, and cleaning, repairing, and replacing the joints on Lines A, B, and C. New catch basins were also installed on these lines. In addition, terrace V-section concrete roadside swales (v-ditches), 6 to 12 inches deep, and located on the uphill side of each terrace, were installed to promote the transport of surface water to the storm drains. Future SCM will require routine inspection of the catch basins and terrace road V-ditches, cleaning any sediment that may accumulate, and repairing significant cracks or other damage.

As a part of a separate study, EPA has also initiated a program to sample and analyze the runoff from the landfill to determine if there are any contaminants in the runoff waters. This data should be available in the summer of 1987.

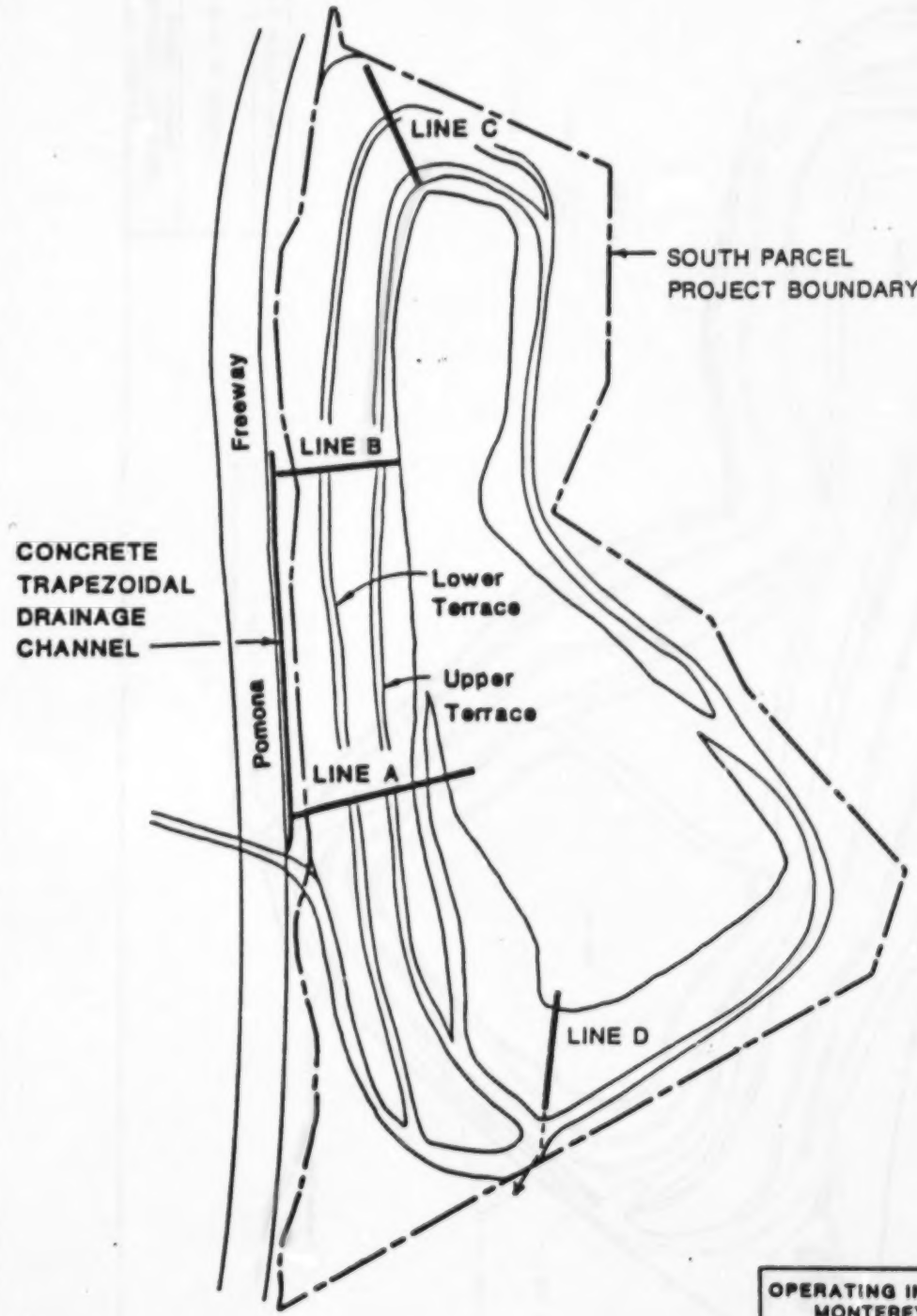
SITE SECURITY

Access to the south parcel of the site is restricted by a perimeter fence. The gate to the fence is located on the North Parcel and is manned by a security guard. The guard logs the entrance and exit of all site visitors and restricts access to authorized individuals only. The gate is locked at all times when the guard is not present. SCM activities include routine inspection and repair of the perimeter fence and provision of the security guard services.



Camp Dresser & McKee	
LAYOUT OF SITE ROADS	
Project No. 120WP2 OPERATING INDUSTRIES LANDFILL	Fig. 5

-10-a



OPERATING INDUSTRIES, INC. LANDFILL
MONTEREY PARK, CALIFORNIA

STORM DRAIN LINE
LOCATION MAP

CAMP DRESSER & McKEE INC.
CDM

Figure No.
6

SLOPE REPAIR AND EROSION CONTROL

As part of SCM, the site is regularly inspected by EPA for cracks, fissures, scarps, and similar evidence of subsidence or slope movement. A toe buttress has been constructed by EPA on the southeast side of the landfill to improve slope stability.

In order to reduce surface emissions of landfill gas and infiltration of stormwater, the slopes must be regraded, recompacted, and/or recovered when cracks, fissures, scarps, etc. develop on the surface of the slopes.

EPA has conducted emergency actions to repair severely eroded slopes on the north face of the landfill. The slopes were regraded and compacted, and one area was revegetated, while the other slope received a soil sealant. In addition, some landfill slopes have been landscaped by EPA with natural grasses and indigenous plants to inhibit erosion.

SCM activities at the OII landfill will continue to require inspection and monitoring of slopes for evidence of subsidence or movement. Areas that begin to be eroded must be repaired immediately upon discovery to prevent escalation of the problem, which could increase surface emissions or, if severely eroded, expose trash.

ALTERNATIVES EVALUATION

The EPA has been conducting site control and monitoring and emergency response activities at the OII site since OII ceased performing these activities in May 1986. The site has become more stabilized as a result of these emergency actions. As a result of EPA's SCM and emergency response actions, the site SCM activities have shifted from an emergency activity to a more routine control or remedial activity. By conducting SCM, EPA has become very familiar with the conditions at the site and has collected valuable data and information for the overall RI/FS. In addition, SCM activities are necessary for the EPA to formulate and evaluate Site Control and Monitoring alternatives to justify the continuation of SCM as a Remedial rather than an Emergency Action.

On-going control and monitoring of the site is necessary to maintain the site integrity and protect public health and the environment until long-term solutions are designed and implemented.

The following objectives and considerations will guide the formulation of the interim remedial alternatives for site control and monitoring.

- SCM remedial alternatives must be easily and rapidly implementable. The interim alternatives must be consistent with the final solution.
- Remedial actions which permanently reduce the volume, toxicity, or mobility of the contaminants at the OII site are preferred.
- Remedial actions must be cost-effective for the interim (5-year) period. It is estimated that construction for the final remedial actions for the site will begin in 1991.

Long-term remediation will be addressed in the comprehensive RI/FS study currently being conducted. The RI/FS for the OII site is expected to be completed in 1989.

Three levels of screening were performed on the remedial action alternatives. First, an initial technology screening was performed to eliminate inapplicable, infeasible or unreliable technologies. Next, an initial alternative screening was performed. Finally, we performed a detailed alternative evaluation according to the NCP, 40 C.F.R. Part 300.6f(i).

The National Oil and Hazardous Substances Contingency Plan (NCP) 40 C.F.R. 300.68(f) specifies that to the extent it is both possible and appropriate, at least one remedial alternative shall be developed as part of the feasibility study in each of the following categories:

Category	Description
1.	Alternatives for treatment or disposal at an off-site facility:
2.	Alternatives which attain applicable or relevant and appropriate Federal public health or environmental standards;
3.	As appropriate, alternatives that exceed applicable or relevant and appropriate public health or environmental standards;
4.	Alternatives that do not meet applicable or relevant and appropriate public health or environmental standards but will reduce the likelihood of present or future threat from the hazardous substances; and
5.	A no action alternative.

Since this study is for an interim remedy, it is not necessary to develop alternatives that meet or exceed all ARAR's. Section 121 of SARA specifically gives a waiver to meeting Federal and State ARARs when the remedy under consideration is an interim remedy. The final remedy developed through the overall RI/FS will address all ARARs, and all the categories for remedial alternatives.

Components of Site Control and Monitoring Activities

Site control and monitoring at the OII site has three components. The first control component is operation, and consists of opening/closing valves, starting motors and other mechanical functions. Maintenance is the second control component, and can be conducted at a baseline level (level 1) consisting of repairs to existing systems such as erosion control and repair of leaks in piping or replacement of small parts in mechanical systems, or it can be performed at a higher level (level 2) to also include preventative maintenance and improvements such as installation of additional gas or leachate wells, road surface improvements, and other system upgrades to improve the operational efficiency of the SCM systems. The third component of SCM is monitoring. Monitoring involves the collection of data, including field measurements of gas wells and probes, the measurement of leachate pumping and collection rates, and the routine inspection of all the environmental control systems on the site. The data collected are used to adjust the systems for maximum control efficiency. The data is also used in the on-going gas control and leachate management operable unit feasibility studies and in the overall RI/FS.

General Response Actions

These three components of SCM were included in the development of general SCM response actions. The array of general SCM response actions which have been identified to comply with the NCP guidance are:

	Response Actions	NCP Category
1.	Periodic performance of Site Control and Monitoring; and	1, 4
2.	Continued SCM with Level 1 Maintenance (repairs and replacements without improvements)	1, 4
3.	Continued SCM with Level 2 Maintenance (including repairs, component replacements and improvements)	1, 4
4.	No action	5

The first general response action is a reactive mode that provides less than full-time attention to SCM and limited repair upon breakdown of any system. The next two general response actions provide for full-time SCM and take a proactive preventive maintenance posture. The "no action" alternative is considered to provide a baseline against which other actions could be compared.

Description of Alternatives

At present, SCM is required for both active and passive systems at the OII site. Active systems include the perimeter gas extraction air-dike control system, leachate control system and the irrigation system. Passive systems include the stormwater drainage system, access road system, site security system and the slope repair and erosion control systems. The active control systems may have some passive components.

Alternative	Frequency	Description
1.	Periodic	Operations Maintenance - Level 1 Monitoring
2.	Full-Time	Operations Maintenance - Level 1 Monitoring
3.	Full-Time	Operations Maintenance - Level 1 and Level 2 Monitoring
4.	No Action	Cessation of all SCM activities.

Alternative 1 - Periodic SCM

This alternative represents a reduction from the current level of effort applied to site control and monitoring activities. Under this alternative, a full-time SCM capacity would be reduced to periodic inspections and monitoring of gas probes and groundwater wells. Mechanical systems would be turned on and left unattended. System malfunctions discovered during periodic inspections would be repaired (i.e., cracked or leaking pipes, or access road deterioration sufficient to prohibit access) but mechanical systems, would only be repaired or minimally replaced until the further work could be accomplished as part of the permanent site remediation. This alternative could allow site systems to deteriorate to a state of reduced operations depending on the cost necessary to repair or replace a system and, time required to achieve the final remediation. The annual cost of Alternative 1 is estimated at $2.5 million, which includes approximately $2 million for offsite trucking and treatment of leachate.

Alternative 2 - Full-Time SCM (Level 1)

This alternative would allow for the continued full-time SCM activities for all site control systems described in Table 1, at Level 1. However, this alternative does not enable improvements to existing control systems, but merely the repair and replacement of existing control systems components to maintain the current condition. This alternative would not address changing conditions at the site. All improvements would be deferred to the permanent remediation of the site as determined by the RI/FS, and any major replacements or systems modifications would be done only as an emergency response action. This could allow conditions to deteriorate to an emergency situation before a response could take place, thereby potentially exposing the community to a hazardous situation. The annual cost of Alternative 2 is estimated at $3.57 million. This annual cost includes an estimated $2 million for offsite trucking and treatment of leachate.

Alternative 3 - Full-Time SCM (Level 1 and 2)

This alternative would continue the current level of effort for the site control and monitoring activities of the site in a full-time role, providing daily operation, repairs and replacements of control system components when necessary, and implementing system improvements consistent with the final remedial action as such improvements are identified (Table 2). Replacement parts for the various system needs would be procurred and installed on a preventative maintenance schedule. System expansions and/or improvements (such as modifications to the air dike or replacement of underground leachate storage tanks or improvements to access roads and cover) could be implemented if the expansion or improvement was identified as a system need consistent with the final remedial action, or necessary to protect public health, welfare and the environment. Annual cost for Alternative 3 is estimated at $5.1 million. This annual cost includes as estimated $2 million for offsite trucking and treatment of leachate.

Alternative 4 - No Action

The no Action Alternative is defined as the cessation of operation and maintenance of site systems. In this scenario, the active gas extraction system would shut down (no electricity to run the blowers applying a vacuum to the system) and gas pressure would continue to build within the landfill, and surface and subsurface emissions could increase. It is anticipated that odors would quickly rise to an offensive level in the vicinity of the landfill and explosive gas levels could be reached. The passive leachate collection system would continue to collect leachate, and transport it to the underground storage tanks. However, when these tanks reached capacity, they would overflow. Leachate would accumulate in this area and could flow offsite as the soil became saturated. Saturated soils could cause slope failures and mud slides. Irrigation would cease on the landfill site, vegetation would be stressed to the point of survival, and erosion would be unchecked. The access roads would revert to "natural"

Table 1

SITE CONTROL AND MONITORING ACTIVITIES

Operation	Maintenance - Level 1	Maintenance - Level 2	Monitoring
Gas Extraction and Air Dike Control Systems			
Flare Station:			
Well head valve adjustment, lighting flares, starting blowers and pumps	Cleaning piping and screens, repair of burners, blowers and condensate return pump	Flare stack extensions new instrumentation for control & recording; silencers with better attenuation and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change.	Monitoring flare temperature, emissions, residence time
Gas Wells:			
Adjustment of well pressure and gas velocity	Periodic repair of well laterals and associated piping	Install additional wells and new piping; more monitoring probes and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change.	Monitor well head pressure and gas velocity and temperature; Perimeter and offsite probe monitoring
Air Dike:			
Starting compressors and adjustment of injection air pressure and volume	Servicing and repair of compressors and piping	Installation of additional air dike wells and probes and general improvements as recommended Also provides for future improvements as system deficiencies are identified, or as site conditions change	Daily monitoring of methane gas concentrations and pressure in air dike probes
Leachate Collection and Treatment System			
Starting air lift and electric pumps; arranging for trucks to remove leachate.	Servicing and repair of pumps, maintenance of air supply piping, repairs to Baker tanks	Expansion of shallow collection system, installation of leachate collection wells, dewatering of gas wells and probes and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change	Inspections for emergent seeps, monitor collected leachate volumes, inspect Baker tanks for leaks, measure levels in leachate and gas wells

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Table 1 (cont'd)

SITE CONTROL AND MONITORING ACTIVITIES, continued

Operation	Maintenance - Level 1	Maintenance - Level 2	Monitoring
Irrigation System			
Manual opening and closing of valves	Valve and pipe maintenance and repair	Install automated system, purchase rented pipe, expand or reduce system as necessary and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change.	Monitor vegetation stress, inspect pipe for leaks, monitor irrigation volumes used
Access Road System			
Not applicable	Dust control and routine grading	Surfacing improvements, traffic control signs, guardrails and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change.	Routine inspection for signs of erosion of subsidence
Stormwater Drainage System			
Not applicable	Cleaning of ditches, catchbasins and road drainage channels; repair of drainage pipe joints, erosion control at outfalls, surface grading to maintain drainage patterns	Install sediment traps at outfalls, reroute drainage to redistribute stormwater flow, collect and treat contaminated stormwater and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change.	Inspect V-ditches and drainage pipes for damage; monitor rainfall amounts and runoff water quality
Site Security			
Access control by guard	Maintenance and repair of site perimeter fence	Security lights, alarms, increase guard hours and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change.	Ingress & egress roster maintained by guard, inspect perimeter fence
Slope Repair and Erosion Control			
Not applicable	Slope grading and compacting, filling cracks and fissures, maintenance of plants	Improvements to site cover and drainage patterns and general improvements as recommended. Also provides for future improvements as system deficiencies are identified, or as site conditions change	Inspection for signs of erosion and slope movement, field monitoring to determine emissions from surface

conditions, meaning that they could become overgrown with brush, eroded, and generally impassable. Storm drains would continue to passively operate, but sediment buildup or materials blocking drainage to the system would eventually divert drainage to other patterns, and could cause erosion, ponding, and excessive infiltration and run-off of contaminants. In this scenario, all site improvements and the correction of any site deterioration would be deferred to the implementation of the final remediation. Continuing investigations at the site could be hindered or delayed due to access difficulties for drilling, sampling, etc. There is no annual cost associated with Alternative 4.

SUMMARY OF INITIAL SCREENING

Initial screening of interim remedial SCM alternatives was performed to eliminate alternatives which were not effective in adequately protecting the public health, welfare, or the environment, did not follow acceptable engineering practices, established EPA guidelines or did not permanently and significantly reduce the mobility, toxicity or volume of hazardous substances. Alternatives that were deemed significantly more costly than other viable alternatives were also eliminated.

Various SCM alternatives were reviewed. Based upon the previous referenced criteria, only two alternatives were found to be acceptable and were selected to undergo further analysis. The table below presents a summary of the screening process performed on the SCM alternatives for the OII site.

SUMMARY OF INITIAL SCREENING OF SCM ALTERNATIVES

Alternative	Screening Result	Comment
Alternatives 1 and 4	Eliminated	Do not protect public health, welfare, or the environment.
Alternatives 2 and 3	Accepted for consideration	Retained for further analysis.

DETAILED ANALYSIS OF ALTERNATIVES

Description of Alternatives

A. Alternative 2 - Full-Time SCM (Level 1)

Alternative 2 provides for:

- Continued SCM of the site systems, including the repair and replacement of system components as necessary for both preventative and emergency maintenance.

- SCM activities are limited to the operation and maintenance of systems currently in place and does not provide for improvements to existing systems.

- Maintains the existing SCM labor force, the site security, and the capability to optimize performance of existing systems.

A detailed breakdown of costs associated with Alternative 2 is included in Table 2.

B. Alternative 3 - Full-Time SCM (Level 1 and Level 2)

Alternative 3 provides for:

- Continuance of the existing SCM labor force to monitor gas probes, manually operate the irrigation system, maintain roadways and provide on-site preventative maintenance to the sites operating systems, plus basic improvements as needed to conduct SCM.

- Improvements to the leachate collection system.

- Interim cover improvements.

- Interim drainage improvements.

- Interim improvements to the gas collection/control systems.

- Undefined future system improvements throughout the life of the project. Potential improvements identified during the interim period (before implementation of the final remedy) will need to be evaluated to determine if the work should be done as a repair or as an improvement.

Improvements included in this alternative are intended to provide for enhanced operational efficiency, reduced threat to public health, welfare and the environment and improved systems' reliability. An allowance has been provided for annual systems improvements as needs are identified through the RI/FS process. A detailed breakdown of costs associated with Alternative 3 is included in Table 3.

Table 2

ANNUAL COSTS - ALTERNATIVE 2 - FULL TIME SCM (Level 1)

Category	Number	Hours and Rate	Annual Cost
1. LABOR [3]			
Office Staff	2 Reports, Data compilation, records, invoices	400 hrs/mo @ $50/hr	$ 240,000
Field Staff, Full-time	1 Supervisor	50 hrs/wk @ $50/hr	$ 130,000
	2 Laborers	40 hrs/wk @ $40/hr	$ 166,400
	1 Laborer	4 hrs/wk @ $40/hr	$ 8,300
	1 Security Guard	50 hrs/wk @ $10/hr	$ 26,000
Field Staff, Part-time	1 Laborer	20 hrs/wk @ $37/hr	$ 38,400
2. HEAVY EQUIPMENT			
Graders, loaders, trucks		100 hrs/mo @ $100/hr	$ 120,000
3. LEACHATE TRUCKING AND TREATMENT		[1] $160,000 per mo.	$1,920,000
4. GSF System [4]		$55,000/mo. x 12 mo.	$ 660,000
5. OVERHEAD			
Field Office, Phone, Utilities		[2] $ 20,000 PER MO.	$ 240,000
		TOTAL ANNUAL O&M	$3,549,100
6. SYSTEM IMPROVEMENTS	(Allowance for)		$ 0
7. REPLACEMENT PARTS	(Allowance for)	$ 2,000 per mo.	$ 24,000
		TOTAL ANNUAL O&M COSTS	$3,573,100

[1] Based on CA DOHS budgets for Mar 86 through Dec 86, and USEPA estimates for the period Dec 86 to May 87.
[2] Includes irrigation water.
[3] Rates include direct and indirect labor costs plus 10% fee.
[4] Based on the following monthly cost estimate:

o Labor:	$25,000
o Repair/Upgrade:	1,000
o Condensate Treatment/Utilities	24,000
o Contingency	5,000

TABLE 3

ANNUAL COSTS - ALTERNATIVE 3 - FULL TIME SCM (Level 2)

Category	Number	Hours and Rate	Annual Cost
1. LABOR [3]			
Office Staff	2 Reports, Data compilation, records, invoices	400 hrs/mo @ $50/hr	$ 240,000
Field Staff, Full-time	1 Supervisor	50 hrs/wk @ $50/hr	$ 130,000
	2 Laborers	40 hrs/wk @ $40/hr	$ 166,400
	1 Laborer	4 hrs/wk @ $40/hr	$ 8,300
	1 Security Guard	50 hrs/wk @ $10/hr	$ 26,000
Field Staff, Part-time	1 Laborer	20 hrs/wk @ $37/hr	$ 38,400
2. HEAVY EQUIPMENT			
Graders, loaders, trucks		100 hrs/mo @ $100/hr	$ 120,000
3. LEACHATE TRUCKING AND TREATMENT		[1] $160,000 per mo.	$1,920,000
4. GSF System (4)		$55,000/mo. x 12 mo.	$ 660,000
5. OVERHEAD			
Field Office, Phone, Utilities		[2] $ 20,000 PER MO.	$ 240,000
6. SYSTEM IMPROVEMENTS	(See Note A Below)		$ 250,000
		TOTAL ANNUAL O&M	$3,549,100
Leachate Improvements		$250,000	
Interim Drainage Improvements		$250,000	
Interim Cover Improvements		$250,000	
Gas Improvements		$250,000	$1,000,000
CONTINGENCY For Annual improvements including labor REPLACEMENT PARTS	(Allowance for)	$ 2,000 per mo.	$ 24,000
		TOTAL ANNUAL O&M COSTS	$5,073,000

A. Yearly budget for future improvements over the next four years including additional gas extraction wells, slope and cover improvements, roadwork, flare stack extension, expanding leachate collection system and associated labor costs.

(1) Based on CA DOHS budgets for Mar 86 through Dec 86, and USEPA estimates for the period Dec 86 to May 87.

(2) Includes irrigation water.

(3) Rates include direct and indirect labor costs plus 10% fee.

(4) Based on the following monthly cost estimate:

o Labor:	$25,000
o Repair/Upgrade:	1,000
o Condensate Treatment/Utilities	24,000
o Contingency	5,000

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Evaluation of Alternatives 2 and 3

As an interim measure, both alternatives 2 and 3 are cost effective remedies consistent with the final remedial action, and both provide protection of public health, welfare and the environment. Neither of these alternatives would achieve ARARs for gas emissions. These alternatives are protective of public health by allowing for the most efficient operation of existing systems to minimize the emissions of gas or leachate from the site. Alternative 3 is more protective of public health and the environment because it allows for system improvements as system deficiencies are identified, or as conditions change requiring expansion or improvement of systems at the site.

Both of the alternatives for interim site control and monitoring will contribute significantly to the reduction of mobility, toxicity and volume of hazardous contaminants at the OII site because gas will be collected and incinerated, and leachate will be collected and treated for removal of hazardous constituents. However, site control and monitoring Alternative 3, Full-Time SCM - Level 1 and 2 will further reduce mobility and volume of hazardous contaminants since improvements can be made to extract leachate and gas from additional areas as changing site conditions may require.

The final remedy will address technologies which should be capable of achieving ARARs for the site. However, our understanding of condition at the site is not complete enough to allow us to implement these control technologies at this time.

The annual cost of Alternative 2 is $3.57 million and the annual cost of Alternative 3 is $5.1 million. Both these estimates include an estimated cost of $2 million for offsite trucking and treatment of leachate. Depending on the alternative selected in the Leachate Management Record of Decision, these annual costs could be revised.

An overall summary of the analysis of Alternatives 2 and 3 is detailed in Table 4.

Recommended Alternative

The recommended alternative for site control and monitoring is Alternative 3, Full-Time SCM - Level 1 and 2. Alternative 3 is more protective of public health and the environment than Alternative 2 (Full-Time SCM - Level 1) because it allows for system improvements as deficiencies are identified, or as conditions change which require expansion or improvement of systems at the site.

The annual operating costs of Alternative 3 are approximately $5.1 million which includes $250,000 for recommended improvements to the leachate collection system, $250,000

TABLE #4

SCM ALTERNATIVES FOR OII LANDFILL

Alternative	Cost ($1,000) Annual SCM	Capital	Present Worth 6%	8%	Public Health Concerns	Environmental Concerns	Technical Concerns[a]	Public Concerns	Permanency[b]
2. Full-Time SCM (Level 1)	3,573	0	15,043	14,257	Prevents exposure to leachate seeps, controls gas migration, minimizes gas emissions but does not allow for control of emissions due to deficiencies in present systems, or changing site conditions	Reduces air emissions and controls odors and dust	Prevents deterioration of operating systems. Does not address deficiencies of present systems	Moderate Resistance	Reduces mobility and volume of leachate and gas in areas presently addressed by existing systems, but not in areas of future emissions
3. Full-Time SCM (Level 2)	5,073	250	17,148	16,252	Prevents exposure to leachate seeps, controls gas migration, minimizes gas emissions, and addresses system deficiencies and changing site conditions	Reduces air emissions and controls odors and dust	Prevents deterioration and provides for improvements to increase operating systems' efficiency and protect public health	Low Resistance	Reduces mobility and volume

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a) These alternatives must maintain site integrity until long term solutions for the site are implemented.

b) Section 121 of the Superfund Amendments and Reauthorization Act of 1986.

for undefined future system improvements, $250,000 for interim cover improvements and $250,000 for interim drainage improvements, and $250,000 for interim improvements to the gas collection systems.

The recommended alternative is both protective and cost-effective and utilizes permanent solutions and treatment technologies to the maximum extent practicable.

A detailed cost summary for annual cost associated with Alternative 3 is provided in Table 3.

Consistency with Applicable or Relevant and Appropriate Requirements (ARAR's)

SARA contains requirements in Section 121(d) which specify that any "...standard, requirement, criteria, or limitation under any Federal environmental law.." or any "...promulgated standard, requirement, criteria, or limitation under a State environmental of facility siting law that is more stringent than any Federal standard...." is considered legally applicable or relevant and appropriate to the CERCLA action.

The preamble to the NCP defines applicable laws as those which would be legally applicable to the response action, if that action were not taken pursuant to CERCLA. "Relevant and appropriate" requirements are those which, while not strictly applicable, are designed to apply to problems sufficiently similar to those encountered at CERCLA sites. Revelant and appropriate requirements may also be those which would be applicable but for jurisdictional restrictions such as the dates.

SARA also requires that EPA formally set forth ARAR's in the Record of Decision (ROD). However, in the case of an interim remedy or operable unit remedial action, a waiver of this requirements is provided for under Section 121(d). The final remedial action for the OII site will be required to meet all ARAR's.

Federal ARAR's identified for SCM activities include: The Resource Conservation and Recovery Act (RCRA), which contains regulations for facilities involved with the treatment, storage or disposal of hazardous waste (40 C.F.R Part 264) are applicable to the landfills where hazardous waste has been disposed. Additionally, the general pretreatment requirements of the Federal Clean Water Act (40 C.F.R. 403) apply to any action which involves the disposal of treated waste to a publicly owned treatment works (POTW).

Applicable state requirements to be considered include guidance from the South Coast Air Quality Management District

(SCAQMD), the California Waste Management Board, the Los Angeles County Sanitary District (LACSD) and the Regional Water Quality Control Baord (RWQCB).

The South Coast Air Quality Management District Rule 1150.1 mandates installation, operation, and maintenance of a landfill gas control system "to prevent the average concentration of total organic compounds over a certain area on the surface of the landfill from exceeding 50 ppm." Further the "maximum concentration of organic compounds as methane, measured at any point on the surface of the landfill, shall not exceed 500 ppm." this requirement would be relevant to the landfill control and monitoring.

The California Waste Management Board regulates landfills in the state. The Board has established a landfill gas migration requirement that the concentration of landfill gases at the perimeter of the landfill shall not exceed 5% methane.

The RWQCB regulates NPDES permits under the Clean Water Act. An NPDES permit may be required for discharges of surface runoff into the Los Angeles County Flood Control System. EPA is conducting sampling of surface water discharges in order to determine whether an NPDES permit is necessary.

The Los Angeles County Sanitary District regulates discharges to their sanitary sewer system, which covers the area surrounding the OII landfill site. LACSD sets effluent discharge limits which must be met for any liquid wastes discharged to their sewer system in compliance with the Federal Clean Water Act. The LACSD will therefore require permits for any discharges of treated or untreated wastes to the sanitary sewer system.

ARAR's identified above are not currently being met by the current level of effort in site control and monitoring. The final remedy will be required to acheive ARAR's. The recommended alternative will lay the foundation for the achievement of ARAR's by allowing for the improvement of existing site systems as deficiencies are identified.

Community Relations

A history of the community relations activities at the OII site, the background on community involvement and concerns, and specific comments on the Feasibility Study and EPA's responses are found in the attached Responsiveness Summary.

Schedule

- Approve Interim Remedial Action — July, 1987
  Sign Record of Decision.
- Commence Interim Remedial Action — August 1, 1987

- Complete Interim Remedial Action August 1, 1992

Future Actions

Two additional operable unit Feasibility Studies are currently underway. The Leachate Management Feasibility Study examines alternatives for managing the leachate generated by the landfill. A record of decision for this operable unit is scheduled for the 4th quarter FY'87. The Gas Control Feasibility Study evaluates alternatives for managing the gas generated at the site. A record of decision for this operable unit is scheduled for 3rd quarter FY'88.

The overall RI/FS for the site is ongoing. Field activities under RI Part 2 are currently underway. The final phase RI/FS Part 3 will address the final remedial action and is expected to be completed in 1991. At that time a Record of Decision will be signed to select the final comprehensive remedial action for the site. An expedited clean-up of the northern 45-acre parcel is anticipated before completion of final remedy. It is expected that this northern portion will be deleted from the National Priorities List in advance of the final site cleanup.